WHAT IS CLAIMED IS:

1. A color printing apparatus for printing by mixing a plurality of primary colors, comprising:

a printer driver for receiving a print instruction of print data issued from an application program, and for rasterizing said print data to produce con-tone/multi-bits bitmap data and bi-tone/single-bit bitmap data;

a page memory for independently storing thereinto both said con-tone/multi-bits bitmap data and said bi-tone/single-bit bitmap data;

a control unit for executing a control operation in such a manner that said con-tone/multi-bits bitmap data is converted into con-tone/multi-bits print data, said bi-tone/single-bit bitmap data is converted into bi-tone/single-bit print data, and at least one of said con-tone/multi-bits print data and said bi-tone/single-bit print data is stored into said page memory in a bitmap format; and

an output control unit for reading at least any one of said con-tone/multi-bits print data and said bi-tone/single-bit print data from said page memory, and for logically synthesizing said print data with each other to output the synthesized print data to a color printing unit.

2. A color printing apparatus as claimed in claim 1 wherein,

said printer driver includes a multi-bits

rasterize flag for indicating that said con-tone/multi-bits bitmap data is rasterized, and also a single-bit rasterize flag for indicating that said bi-tone/single-bit bitmap data is rasterized.

3. A color printing apparatus as claimed in claim 1 wherein,

said output control unit includes:

a color converting unit for separating said con-tone/multi-bits bitmap data into a plurality of primary colors; and

an OR gate circuit for OR-gating bit data of said bi-tone/single-bit bitmap data and said bi-tone/single-bit bitmap data every bit position separated from said con-tone/multi-bits bitmap data by said color converting unit.

4. A color printing apparatus as claimed in claim 3 wherein,

said output control unit includes,

an inverting circuit for inverting said bi-tone/single-bit bitmap data every bit; and

an AND gate circuit for AND-gating said inverted bitmap data and said con-tone/multi-bits bitmap data every bit position.

5. A color printing apparatus as claimed in claim 3 wherein,

when said con-tone/multi-bits print data is stored into said page memory, said control unit sets the bit position of the bi-tone/single-bit print data

within said con-tone/multi-bits print data to non-print data in response to said single-bit rasterize flag.

6. A color printing apparatus as claimed in claim 1 wherein,

said control unit stores both said bi-tone/single-bit print data and said con-tone/multi-bits print data into plural sub-divided areas of said page memory in the unit of a block based upon address information designated to said print data; and sets said area which is not designated by said address information to a non-print area.

7. A color printing apparatus as claimed in claim 1 wherein,

said output control unit judges as to whether or not both said con-tone/multi-bits print data and said bi-tone/single-bit print data stored in said page memory are required to be printed out in response to both said single-bit rasterize flag and said multi-bits rasterize flag; and said output control unit outputs only said print data to the color printing unit.

8. A color printing apparatus as claimed in claim 1 wherein,

said control unit designates resolution of said bi-tone/single-bit bitmap data as first resolution equal to the output resolution of the color printing unit, and designates resolution of said con-tone/multi-bits bitmap data as second resolution equal to 1/n of said first resolution, and also stores both said bi-

tone/single-bit bitmap data and said con-tone/multi-bits bitmap data into said page memory; and

said output control unit includes an enlarging circuit for enlarging said con-tone/multi-bits bitmap data having said second resolution to said first resolution to logically synthesize said enlarged con-tone/multi-bits bitmap data and said bi-tone/single-bit bitmap data and output synthesized bitmap data to the color printing unit.

9. A printing system comprised of an upper-grade apparatus for rasterizing print data and a color printing apparatus for printing said rasterized print data by mixing a plurality of primary colors with each other, wherein,

said upper-grade apparatus includes first means for separately rasterizing said print data as bi-tone/single-bit print data and con-tone/multi-bits print data and second means for supplying at least one of said rasterized bi-tone/single-bit print data and said rasterized con-tone/multi-bits print data to said color printing apparatus; and

said color printing apparatus includes a page memory for separately storing the entered bi-tone/single-bit print data and the entered con-tone/multi-bits print data in a bitmap data format, and third means for reading said bitmap data from said page memory in the unit of the primary color to print out the read bitmap data.

10. A printing system as claimed in claim 9 wherein,

said first means includes a multi-bits rasterize flag for indicating that said con-tone/multi-bits print data is rasterized, and also a single-bit rasterize flag for indicating that said bi-tone/single-bit print data is rasterized.

11. A printing system as claimed in claim 9 wherein,

said color printing apparatus judges as to whether or not both said con-tone/multi-bits print data and said bi-tone/single-bit print data, which are stored into said page memory in a bitmap format, are required to be printed out to thereby print out at least one of said con-tone/multi-bits print data and said bi-tone/single-bit print data.

12. A printing system as claimed in claim 11 wherein,

said color printing apparatus judges as to whether or not both said con-tone/multi-bits print data and said bi-tone/single-bit data, which are stored into said page memory in a bitmap format, are required to be printed out based upon said single-bits rasterize flag and said multi-bits rasterize flag.

13. A printing system as claimed in claim 9 wherein,

said upper-grade apparatus rasterizes in a bitmap format both said bi-tone/single-bit print data

having first resolution equal to output resolution of said color printing apparatus and said con-tone/multi-bits print data having second resolution equal to 1/n of said first resolution; and

said color printing apparatus includes an enlarging circuit for enlarging said con-tone/multi-bits print data having said second resolution to said first resolution, and prints out in accordance with the enlarged con-tone/multi-bits print data and the bitmap data of said bi-tone/single-bit print data.